11

The Essentials of Contraception:

Effectiveness, Safety, Noncontraceptive Benefits, and Personal Considerations

> *Family planning decisions should be made on a completely voluntary basis, but also on the basis of thoroughly informed choice on the part of individuals and couples. A decision about childbearing cannot be called voluntary if individuals and couples have not been previously educated and informed about the meaning of family planning to their lives and the lives of their children and about the methods of family planning that are available.*
>
> — Dr. Fred T. Sai

Choosing a contraceptive is an important decision. A method that is not effective can lead to an unwanted pregnancy. A method that is not safe can cause medical problems. A method that does not fit a person's lifestyle is not likely to be used correctly or consistently. Users them-

selves should make the decision about their contraceptives. In making that decision, they need to consider the feelings and attitudes of their partners. Through counseling, you can help your client choose the most suitable contraceptive. You also can influence the user's motivation and ability to use the method correctly.[7] Encourage clients to educate themselves about the various methods available.

Demographic and Health Surveys indicate that married women of reproductive age in Africa are less likely to use a method of family planning than are married women of reproductive age in other regions of the world. The percentage of married women at risk for pregnancy who report using a method of family planning ranges from 5% in Uganda to 75% in Mauritius. The percentage who report using a modern method ranges from only 1% in Mali to 49% in Mauritius.[19] See Table 1:6 in Chapter 1 on Benefits of Family Planning.

The prevalence of contraceptive use is lowest among young women and highest among women in their late 20s through their 30s. Once women have two or three children, they are more likely to use a family planning method. Education also plays an important role in whether a woman will use a contraceptive method.

Most married women in Africa know about family planning. However, in Burundi, Ghana, Liberia, Mali, Niger, Senegal, and Uganda, fewer than 40% can spontaneously name any modern method of family planning.[19]

Contraceptive users may employ a variety of methods throughout their lives and should know enough to consider various contraceptive methods. The client's choice of a contraceptive depends on several major factors: effectiveness, safety, noncontraceptive benefits, and personal considerations.

EFFECTIVENESS: "WILL IT WORK?"

"Is the condom really effective?"

"Which would be the most effective method for me?"

"Why did one magazine say diaphragms are 98% effective and another say they're 80% effective?"

"Can you still get pregnant if you take your pills every day on schedule?"

"Will it work?" is the question usually asked first and most frequently about any contraceptive method. Because this question cannot be answered with certainty for any particular couple, most clinicians and counselors try to help clients understand something of the difficulty of quantifying efficacy.

It is useful to distinguish between measures of contraceptive effectiveness and measures of contraceptive failure. If 18% of women using the diaphragm became accidentally pregnant in their first year of use, that does not mean that the diaphragm is 82% effective. The actual percentage would be lower, because some of those women would not have become pregnant even if they had used no contraceptive. For example, if 90% would have become pregnant had they used no contraceptive, using the diaphragm reduced the number of unplanned pregnancies from 90% to 18%, a reduction of 80%. If only 60% of these women would have become pregnant if they did not use contraception, the diaphragm's true efficacy would be only 70%.

However, because no study can say how many women would have become pregnant had they not used the contraceptive, it is simply not possible to directly measure effectiveness. Thus, we can speak only of pregnancy rates—the proportion of users who became pregnant while using the contraceptive.

Efficacy During Typical and Perfect Use

Our current understanding of contraceptive efficacy is shown in Table 11:1. Because many of the studies on contraceptive efficacy have flaws, we can only estimate the risk of pregnancy. We provide estimated percentages for the following events:

1. Becoming pregnant during the first year for the *typical user* who may not always use the method consistently and correctly
2. Becoming pregnant during the first year for the *perfect user* (someone who uses the method consistently and correctly)
3. Continuing to use the method after 1 year

Efficacy Over Time

The annual risk of contraceptive failure among methods that require user compliance should be lower the longer a woman uses the method, as users prone to fail do so early. As time passes, the group being studied should have relatively more successful contraceptive users (or those who are relatively infertile).

Still, over time the cumulative likelihood of contraceptive failure grows. For example, suppose that 18% of diaphragm users become pregnant in the first year, 12% in the second year, and 8% in the third year. By the end of the third year, 34% will have accidentally become pregnant (this result reflects the smaller size of the user pool in each year).

Table 11:1 Percentage of women experiencing an unintended pregnancy during the first year of perfect use and the first year of typical use and the percentage continuing use at the end of the first year, United States

Method	Percent of women experiencing an accidental pregnancy within the first year of use		Percent of women continuing use at one year[3]
	Typical use[1]	Perfect Use[2]	
Chance[4]	85	85	
Spermicides[5]	26	6	40
Periodic abstinence	25		63
Calendar		9	
Ovulation method		3	
Sympto-thermal[6]		2	
Post-ovulation		1	
Cap[7]			
Parous women	40	26	42
Nulliparous women	20	9	56
Sponge			
Parous women	40	20	42
Nulliparous women	20	9	56
Diaphragm[7]	20	6	56
Withdrawal	19	4	
Condom[8]			
Female (Reality)	21	5	56
Male	14	3	61
Pill	5		71
Progestin only		0.5	
Combined		0.1	
IUD			
Progesterone T	2.0	1.5	81
Copper T 380A	0.8	0.6	78
LNg 20	0.1	0.1	81
Depo-Provera	0.3	0.3	70
Norplant and Norplant-2	0.05	0.05	88
Female sterilization	0.5	0.5	100
Male sterilization	0.15	0.10	100

Emergency Contraceptive Pills: Treatment initiated within 72 hours after unprotected intercourse reduces the risk of pregnancy by at least 75%.[9]

Lactational Amernorrhea Method: LAM is a highly effective, *temporary* method of contraception.[10]

Table 11:1 Percentage of women experiencing an unintended pregnancy failure during the first year of perfect use and the first year of typical use and the percentage continuing use at the end of the first year, United States — Continued

Source: Hatcher RA et al. (1998)

[1]Among *typical* couples who initiate use of a method (not necessarily for the first time), the percentage who experience an accidental pregnancy during the first year if they do not stop use for any other reason.

[2]Among couples who initiate use of a method (not necessarily for the first time) and who use it *perfectly* (both consistently and correctly), the percentage who experience an accidental pregnancy during the first year if they do not stop use for any other reason.

[3]Among couples attempting to avoid pregnancy, the percentage who continue to use a method for one year.

[4]The percentages becoming pregnant in columns (2) and (3) are based on data from populations where contraception is not used and from women who cease using contraception in order to become pregnant. Among such populations, about 89% become pregnant within one year. This estimate was lowered slightly (to 85%) to represent the percent who would become pregnant within one year among women now relying on reversible methods of contraception if they abandoned contraception altogether.

[5]Foams, creams, gels, vaginal suppositories, and vaginal film.

[6]Cervical mucus (ovulation) method supplemented by calendar in the pre-ovulatory and basal body temperature in the post-ovulatory phases.

[7]With spermicidal cream or jelly.

[8]Without spermicides.

[9]The treatment schedule is one dose within 72 hours after unprotected intercourse, and a second dose 12 hours after the first dose. Prevon (one dose is 2 blue pills) is the only dedicated product specifically marketed for emergency contraception in the United States. In addition, the U.S. Food and Drug Administration has declared the following brands of oral contraception safe and effective for emergency contraception: Ovral (1 dose is 2 white pills), Alesse or Levlite (1 dose is 5 pink pills), Nordette or Levlen (1 dose is 4 light-orange pills), Lo/Ovral or Levora (1 dose is 4 white pills), Triphasil or Tri-Levlen (1 dose is 4 yellow pills), Trivora (one dose is 4 pink pills).

[10]However, to maintain effective protection against pregnancy, another method of contraception must be used as soon as menstruation resumes, the frequency or duration of breastfeeds is reduced, bottle feeds are introduced, or the baby reaches six months of age.

FACTORS INFLUENCING EFFICACY

Some methods, such as sterilization, implants, and injectables, are naturally very effective, and proper and consistent use is nearly guaranteed. Other methods, such as the pill and intrauterine device (IUD), are also naturally very effective, but there is still room for the user to err, by forgetting to take her pills or failing to check for proper placement of IUD strings. Fertility awareness and barrier methods have lower natural effectiveness, and users have greater room to use the method improperly.

User Characteristics

Characteristics of the user can affect the probability that a contraceptive user may become pregnant:

1. **Pattern of use.** Imperfect users can expect to have higher pregnancy rates than perfect (consistent and correct) users. Unfortunately, most studies have not been able to measure perfect use adequately.
2. **Frequency of intercourse.** Among the characteristics of perfect users, the most important user characteristic that determines contraceptive failure is frequency of intercourse.[13,24]
3. **Age.** Because a woman's biological ability to conceive and bear a child declines with age, pregnancy rates should decline with age. The biological decline is likely to be greatest among those who are routinely exposed to sexually transmitted infections (STIs) such as chlamydia and gonorrhea. Among those not so exposed to STIs, the decline is likely to be moderate until a woman reaches her late 30s.[14] In many studies, however, increasing age is associated with decreasing frequency of intercourse, a factor that should drive down pregnancy rates.[25]
4. **Involuntary intercourse.** In some relationships, a woman may be pressured or forced into intercourse. In these situations, she may not be able to use methods that are employed at the time of intercourse, such as condoms, vaginal barriers, or spermicides.

User characteristics such as race and income seem to be less important determinants of contraceptive failure.

Influence of the Investigator

The competence and honesty of the investigator also affect the published results. The errors committed by investigators range from simple arithmetical mistakes to outright fraud.[22]

Methodological Pitfalls

Family planning providers should know that published studies are plagued by several methodological problems.

Pearl index. One of the most common problems is the inappropriate use of a measure of failure called the Pearl index. This measure is often used to compare pregnancy rates obtained from studies of women using the method for different amounts of time. As the risk of contraceptive failure declines over time because less effective users are removed as they become pregnant, those still using after a long period are unlikely to fail. Thus, by running a study a long time, an investigator can drive the reported pregnancy rate lower and lower. A better measure of failure is the life table, which is easy to interpret and controls for the distorting effects of varying durations of use.

Determining pregnancy. Deciding which pregnancies to count can be a problem. Most studies count only the pregnancies women observe and report. If, on the other hand, a pregnancy test were administered every month, the number of pregnancies (and hence the pregnancy rate) would increase because early fetal losses not observed by the woman would be added to the pregnancy total. Such routine pregnancy testing in the more recent pill trials has resulted in higher pregnancy rates than would otherwise have been obtained and makes their results not comparable to other pill trials or trials for other methods.

Incentives. Many studies of the pill and IUD are conducted because companies wishing to market them must carry out clinical trials to demonstrate their efficacy. In contrast, there have been few studies of withdrawal, because there is no financial reward for investigating this method. Moreover, researchers may have little incentive to report unfavorable results. Surgeons whose patients have with high pregnancy rates following sterilization simply do not write articles calling attention to their poor surgical skills. Likewise, drug companies do not commonly publicize their failures.

Goals for Teaching Efficacy

Keep these thoughts in mind when counseling about contraceptive effectiveness:

1. **The best method of contraception is one that actually will be used correctly and consistently**.
2. **Pregnancy rate estimates apply to groups, not an individual user**. For example, a 5% probability of pregnancy during the first year for the pill will not protect the careless user and may not even apply to very young women, who are less likely to be compliant. The 20% probability of pregnancy during the first year from a diaphragm study need not discourage a careful and disciplined woman who has infrequent intercourse. Help your clients understand that numbers are not what protect—correct and consistent use protects.
3. **Make sure your staff provides consistent information**. One study of information provided by family planning staff indicated that providers tended to give the lowest reported probabilities of pregnancy for pills and IUDs, intermediate probabilities of pregnancy during typical use for diaphragms and foam, and higher than typical probabilities of pregnancy for condoms.[21] Thus, family planning providers may extensively bias their client education in favor of methods they provide most frequently. Despite their safety, condoms and withdrawal get an undeserved low efficacy score within many family planning clinics and offices. You can avoid unintentional bias by deciding carefully what pregnancy rates your clinic or staff members are going to use.
4. **Technology fails people just as people fail technology**. In the past, clients were often told that unplanned pregnancies were their own fault because they did not use their method correctly or carefully. Contraceptives are imperfect and can fail even the most diligent user.

5. **Using two methods at once dramatically lowers the risk of unplanned pregnancy**, provided they are used consistently. If one of the methods is a condom or vaginal barrier, protection from disease transmission is an added benefit. For example, the probabilities of pregnancy during the first year of perfect use of condoms and perfect use of spermicides are estimated to be 3% and 6%, respectively. During perfect use, it is reasonable to assume that the contraceptive mechanisms of condoms and spermicides operate independently. The annual probability of pregnancy during simultaneous perfect use of condoms and spermicides would be 0.1%, the same as that achieved by the combined pill (0.1%) and the Levonorgestrel (LNg 20) IUD (0.1%) during perfect use. Even if the annual probabilities of pregnancy during perfect use for the condom and spermicides were twice as high—6% and 12%, respectively—the annual probability of pregnancy during simultaneous perfect use would be only 0.4%, comparable to that of the minipill (0.5%) and the Copper T 380A IUD (0.6%)![11]

6. **Methods that protect a person for a long time** (sterilization, implants, IUDs, and long-acting injections) **tend to be associated with higher contraceptive efficacy**, primarily because there is little opportunity for user error.

SAFETY: "WILL IT HURT ME?"

"I smoke. Won't the pill give me a heart attack?"

"Could the IUD puncture my womb?"

"Will I be able to get pregnant after stopping my method?"

In general, contraception poses few serious health risks to users, and no method poses as great a health risk as does pregnancy. Unplanned and unwanted pregnancies unnecessarily place women at health risks. Still, some contraceptives pose potential risk to the user.

- The method itself may have inherent dangers: it might be associated with death, hospitalization, surgery, side effects, infections, loss of reproductive capacity, or pain.
- Unplanned pregnancy is associated with risk: a particular woman must assess both the likelihood of contraceptive failure and the dangers a pregnancy would pose to both herself and her child. (See Chapter 1 on Health Benefits of Family Planning.)
- Future fertility may be influenced by contraceptive choice. (See Chapter 7 on Infertility.)

Major Health Risks

For the most serious outcome of all—death—the absolute level of risk from contraception is extraordinarily low for most women. The risk of serious illness is also uncommon; the risk is greatest in women with underlying medical conditions that may be influenced by hormonal contraception:

- **Cardiovascular disease**. The pill has been associated with an increased risk of myocardial infarction and stroke. About one death in 100,000 users under the age of 45 has been attributable to the pill.[8] Risk from the pill increases with age because risk factors such as hypertension, thromboembolic disease, diabetes, and a sedentary lifestyle increase with age. Smoking is a definite risk factor.
- **Cancer**. The association between cancer of the breast and cervix and the use of the pill remains under scrutiny.
  - — There may be specific subpopulations of users who have an increased risk of breast cancer.[20] Risk factors for breast cancer include a family history of breast cancer and delayed or no childbearing.
  - — Cervical cancer has been reported more often in pill users, although the correlation may be due to other, unidentified factors that place the oral contraceptive user at a higher risk.[2] Risk factors for cancer include having had multiple sexual partners and cigarette smoking.

Conversely, the pill appears to protect users against cancers of the endometrium[3] and ovary.[4] Also, barrier methods used in conjunction with spermicides decrease the user's risk of cervical cancer.[15,17]

Future Fertility

An important issue in helping a couple evaluate the safety of a contraceptive may be their future childbearing aspirations. There are several important considerations to keep in mind to protect the future fertility of contraceptive clients:

- **Abstinence** is the single most effective and risk-free means of protecting future fertility.
- **Pregnancy** and the outcomes of pregnancy carry substantial risks to future fertility.
- **The pill**, which has a protective effect against acute gonococcal pelvic inflammatory disease (PID) and decreases the risk of ovarian cyst surgery and fibromyomata, may be the ideal contraceptive option for the woman who wants to be sexually active for a number of years before bearing children.[8] Perhaps the best contraceptive option for a young healthy woman who wishes to delay her childbearing is the combination of pill and condom.
- **Mechanical and chemical barriers** combined offer the greatest protection against damage to the fallopian tubes.[5]
- **Some IUDs**, which can increase the risk of PID, are probably the least desirable option for women who want to preserve fertility.[16] The Levonorgestrel IUD, however, may decrease the risk of PID.
- **Sterilization** must be considered permanent.

No matter what other methods of contraception a woman is using, if she is at any risk because her partner tests positive for the human immunodeficiency virus (HIV) or because she does not know his status, she should use plastic or latex condoms with every sexual act. No other contraceptive method besides abstinence provides the same degree of protection.

Side Effects

Often, the minor side effects of contraceptives, in addition to the more serious complications, influence whether an individual selects a certain method. "What physical changes will I undergo?" "Will I be annoyed by spotting, weight gain, cramping, or the sensation of using a given method?" Clinicians cannot dismiss the important role that side effects play when an individual must repeatedly assess whether to continue using a method or whether to use it consistently.

Side effects can be hormonally or mechanically induced. Headaches, weight gain, and depression can be side effects of hormonal methods. Menstrual changes such as spotting and decreased or increased bleeding can be caused by hormonal or mechanical methods. Changes in physical sensations, such as decreased sensitivity of the penis or a feeling of pressure on the pelvic walls, and the problem of uterine cramping, are generally caused by mechanical methods.

For almost all of these side effects, instruction and client education can help users accept and understand what is happening. The appearance of side effects that are not serious is not a medical reason to avoid using a method.

Precautions

Because some women are relatively more likely to encounter problems with a specific method of birth control, considering the precautions to the methods is important when a woman chooses her method. Most of the serious pill and IUD problems could be avoided by (1) not using the methods to which a woman has medical precautions and (2) teaching the user to recognize the early warning signals for serious complications.

The authors prefer to use the term “precautions” rather than contraindications. In the past, lists of contraindications have created barriers to contraceptive provision and use. Health educators, journalists, clinicians, and clients need only see the word “contraindication” linking a medical condition and a medication they are considering using,

and all attempts to qualify the degree of contraindication are virtually futile. In place of contraindicating the use of a method, a graded scale of conditions may serve as medical eligibility criteria for starting contraceptive methods. The Appendix, developed by the World Health Organization, lists the conditions and considerations for selection.

Goals for Teaching Safety

1. **Try to educate the client about misconceptions**. People who are afraid do not respond well to rational persuasions. Many clients hold certain opinions about contraceptives—that the pill is very dangerous even to healthy, nonsmoking young women or that injectables lead to permanent sterility (see Table 11:2). However, if you see you are getting nowhere, stop. Help each client select a method that can be used without fear.
2. **Make sure that you and your staff know all about the major side effects** of contraceptives, such as the relationship between pill use and blood clots or reproductive cancers. Give accurate information.
3. **Tell clients what they need to know** even if they do not ask. Clients do not always ask the questions they need answered.
4. **Compare the contraceptive risks** with the risks a woman faces if she becomes pregnant. In general, the risks of pregnancy, abortion, and delivery are far greater than those for using a contraceptive.
5. **Help clients make a contraceptive choice that will protect them from both pregnancy and sexually transmitted infections (STIs)**. Safety concerns often overlap with worries about infections.
6. **Teach clients the danger signals** of the method they select. If a danger signal appears, the informed user can quickly seek help.

NONCONTRACEPTIVE BENEFITS

Although the noncontraceptive benefits provided by certain methods are not generally the major determinant for selecting a contraceptive method, they certainly can help clients decide between two or more suitable methods (see Table 11:3).

As the acquired immunodeficiency syndrome (AIDS) epidemic continues, methods that reduce the user's risk of acquiring human immunodeficiency virus (HIV) infection provide a noncontraceptive benefit that may weigh as heavily as the contraceptive benefit. Any sexually active person who may be at risk of acquiring infection with HIV, human papilloma virus (HPV), gonorrhea, syphilis, chlamydia, herpes, or other STI should consider male (or female) condoms.

Oral contraceptives offer several noncontraceptive benefits: they protect against symptomatic PID, cancers of the ovary and endometrium, recurrent ovarian cysts, and benign breast cysts and fibroadenomas.[8] In addition, as women who have suffered menstrual cramps and discomforts can attest, the pill eases their discomforts. Make it a practice to tell your clients about the noncontraceptive benefits of the various methods. Having additional reasons for using the contraceptive will probably improve their motivation to use the method correctly and consistently.

Table 11:2 Percentage of women who do not use contraceptives reporting health concerns about pills, IUDs, and sterilization

	Pill				IUD				Sterilization			
Country	No problem	Health concerns	Other concerns	Don't know	No problem	Health concerns	Other concerns	Don't know	No problem	Health concerns	Other concerns	Don't know
Burundi	21.1	15.9	1.6	61.5	18.0	22.5	0.0	59.5	43.6	3.9	0.0	52.5
Ghana	24.3	28.6	5.0	42.1	10.6	23.4	6.4	59.6	19.2	21.9	1.4	57.5
Kenya	18.6	43.2	6.2	32.0	12.4	31.6	21.0	35.0	29.1	25.2	6.6	39.1
Mali	31.5	14.5	17.5	36.5	24.6	14.9	19.7	40.9	33.4	8.1	34.5	24.0
Sudan	12.9	45.1	4.2	37.9	14.8	36.2	14.1	34.9	43.8	11.6	26.8	17.9
Uganda	7.6	42.5	3.7	46.2	7.9	36.5	7.4	48.2	12.2	23.6	21.0	43.2

Source: Bongaarts and Bruce (1995)

Personal Considerations

A method that does not fit the individual's personal lifestyle or societal norms will not likely be used correctly or consistently, and possibly will not be used at all. Take into account the woman's and partner's attitudes as well as their situation (see Table 11:4). Some issues are relatively easy to manage, such as providing health education to couples who lack knowledge of contraceptive methods. Other issues, however, such as a husband's disapproval of contraception, require great care.

Comfort and Confidence

The best method of birth control for clients is one that will be in harmony with their wishes, fears, preferences, and lifestyle. Table 11:5 lists questions designed to help clients determine whether a certain birth control method is a realistic choice. These questions may be used exactly as written or adapted for local use without permission. "Don't know" answers point to a need for more thinking, more introspection, or more information. "Yes" answers may mean the user might not like or be successful with the method. Most individuals will have a few "yes" answers. "Yes" answers mean that potential problems may lie in store. If clients have more than a few "yes" responses, they may want to talk to their clinician, counselor, partner, or friend. Talking about their concerns can help them decide whether to use this method, or if they use it, how to do so in a way that will truly be effective for them. In general, the more "yes" answers they have, the less likely they are to use this method consistently and correctly.

Table 11:3 Noncontraceptive benefits, risks, and side effects

Method	Dangers	Side Effects	Noncontraceptive Benefits
Pill	Cardiovascular complications (stroke, heart attack, blood clots, high blood pressure), depression, hepatic adenomas, possible increased risk of breast and cervical cancers	Nausea, headaches, dizziness, spotting, weight gain, breast tenderness, chloasma	Decreases mentrual pain, PMS, and blood loss; protects against symptomatic PID, some cancers (ovarian, endometrial) and some benign tumors (leiomyomata, benign breast masses), and ovarian cysts; reduces acne
IUD	PID following insertion, uterine perforation, anemia	Menstrual cramping, spotting, increased bleeding	None known except for progestin-releasing IUDs, which decrease menstrual blood loss and pain
Male Condom	Anaphylactic reaction to latex	Decreased sensation, allergy to latex, loss of spontaneity	Protects against sexually transmitted infections, including HIV; delays premature ejaculation
Female Condom	None known	Aesthetically unappealing and awkward to use for some	Protects against sexually transmitted infections
Implant	Infection at implant site, complicated removals, depression	Tenderness at site, menstrual changes, hair loss, weight gain	Lactation not disturbed; may decrease menstrual cramps, pain, and blood loss
Injectable	Depression, allergic reactions, pathologic weight gain, possible bone loss	Menstrual changes, weight gain, headaches, adverse effects on lipids	Lactation not disturbed, reduces risk of seizures, may have protective effects against PID and ovarian and endometrial cancers
Sterilization	Infection; anesthetic complications; if pregnancy occurs after tubal sterilization, high risk that it will be ectopic	Pain at surgical site, psychological reactions, subsequent regret that the procedure was performed	Tubal sterilization reduces risk of ovarian cancer and may protect against PID
Abstinence	None known	Psychological reactions	Prevents infections, including HIV

Table 11:3 Noncontraceptive benefits, risks, and side effects (Continued)

Method	Dangers	Side Effects	Noncontraceptive Benefits
Barriers: Diaphragm, Cap, Sponge	Vaginal and urinary tract infections, toxic shock syndrome	Pelvic pressure, vaginal irritation, vaginal discharge if left in too long, allergy	Provides modest protection against some sexually transmitted infections
Spermicides	Vaginal and urinary tract infections	Vaginal irritation, allergy	Provides modest protection against some sexually transmitted infections
Lactational Amenorrhea Method (LAM)	Increased risk of HIV transmission to infant if mother HIV+	Mastitis from staphylococcal infection	Provides excellent nutrition for infants under 6 months old

Source: Hatcher et al. (1998)

Reproductive Life Span

A typical African woman spends about 35 years—more than half her life span of 67 years—at potential biological risk of pregnancy, during the time from menarche (at about age 13) to natural menopause (at about age 48). What matters most to a woman when she considers a contraceptive will ordinarily change over the course of her reproductive life span. As is shown in Table 11:6, different reproductive stages are associated with distinct fertility goals and sexual behaviors.

- From menarche to first planned birth, the primary fertility goal is to postpone pregnancy and birth.
- Between the first and last planned births, the primary goal is to space pregnancies leading to births.
- Between the last planned birth and menopause, the goal is to cease childbearing altogether.

In the stage between her last birth and menopause, the most important factor for a woman is a method's efficacy at preventing pregnancy; women typically opt for female or male sterilization.

Table 11:4 Percentage of women who do not use contraceptives reporting reasons for nonuse

Country	Lack of knowledge	Health concerns	Husband disap-proves	Infrequent sex	Religion	Difficult access	Opposed to family planning	Cost too high	Fatalism	Incon-venient to use	Others disapprove	Other
Burundi	34.8	7.7	5.7	7.4	3.5	3.3	1.0	4.5	3.0	4.1	1.0	24.0
Ghana	33.5	16.0	6.8	8.3	6.3	5.3	3.9	2.9	n.a.	3.4	0.5	13.1
Kenya	27.6	16.8	19.8	7.3	2.7	1.2	4.1	0.2	1.9	2.2	0.4	16.0
Mali	41.3	4.6	12.1	0.5	12.3	3.4	n.a.	n.a.	n.a.	n.a.	3.2	22.6
Sudan	32.8	26.3	10.7	1.2	7.5	4.2	3.0	1.2	9.6	2.7	0.3	0.6
Uganda	48.2	8.0	8.4	3.9	1.7	10.1	3.9	4.9	2.8	2.8	0.9	4.4

Source: Bongaarts and Bruce (1995)

Table 11:5 Contraceptive comfort and confidence scale

Method of birth control you are considering using: _____

Length of time you used this method in the past: _____

Answer YES or NO to the following questions:	YES	NO
1. Have I had problems using this method before?		
2. Have I ever become pregnant while using this method?		
3. Am I afraid of using this method?		
4. Would I really rather not use this method?		
5. Will I have trouble remembering to use this method?		
6. Will I have trouble using this method correctly?		
7. Do I still have unanswered questions about this method?		
8. Does this method make menstrual periods longer or more painful?		
9. Does this method cost more than I can afford?		
10. Could this method cause me to have serious complications?		
11. Am I opposed to this method because of any religious or moral beliefs?		
12. Is my partner opposed to this method?		
13. Am I using this method without my partner's knowledge?		
14. Will using this method embarrass my partner?		
15. Will using this method embarrass me?		
16. Will I enjoy intercourse less because of this method?		
17. If this method interrupts lovemaking, will I avoid using it?		
18. Has a nurse or doctor ever told me NOT to use this method?		
19. Is there anything about my personality that could lead me to use this method incorrectly?		
20. Am I at any risk of being exposed to HIV (the AIDS virus) or other sexually transmitted infections if I use this method?		

Total number of YES answers: _____

Most individuals will have a few "yes" answers. "Yes" answers mean that potential problems may arise. If you have more than a few "yes" responses, you may want to talk with your physician, counselor, partner ,or friend to help you decide whether to use this method or how to use it so that it will really be effective for you. In general, the more "yes" answers you have, the less likely you are to use this method consistently and correctly at every act of intercourse.

Table 11:6 The stages of reproductive life

	Adolescents and young adults		Later reproductive years	
	Menarche to first intercourse	**First intercourse to first birth**	**First birth to last birth**	**Last birth to menopause**
Fertility goals				
Births	postpone	postpone	space	prevent
Ability to have children	preserve	preserve	preserve	irrelevant
Sexual behavior				
# of partners	none	multiple?	one?	one?
Coital frequency	zero	moderate to high	moderate	moderate to low
Coital predictability	low	moderate to high	high	high
Importance of method characteristics				
Pregnancy prevention		high	moderate	high
Prevention of pelvic inflammatory disease (PID)		high	moderate	low
Not coitus-linked		high	low	moderate
Reversibility		high	high	low
Most common methods				
Most common		pill	pill	sterilization
Next most common		condom	condom	pill, condom

Source: Forrest (1993)

Cost of Contraceptives

We cannot provide contraceptives without considering the client's financial circumstances.[12] A woman should be told in advance what her ongoing expenses will be. If cost will impose a major hardship, offer an alternative contraceptive or a means of obtaining the desired contraceptive less expensively. The economic implications of using some forms of contraception have become significant. However, the cost of contraception is substantially less than the cost of delivering and raising a child.[23]

Pattern of Sexual Activity. In considering their contraceptive choice, both women and men should be influenced by their number of partners and their frequency of intercourse.

The number of partners affects the risk of STIs. In some cases, it will be obvious that an individual has more than one partner at any given time. Less obvious are the individuals who practice serial monogamy. These persons have only one partner at a time; however, the relationships are not permanent, and after they end, the individual will move on to a new partner. The methods that would most protect individuals from STIs require the commitment, understanding, and assertiveness of the client. The practitioner recommending the use of condoms (male or female) or other barrier protection must be prepared to take the time required to discuss risks, encourage behavioral change, and teach skills.

The frequency of intercourse also has bearing on a person's contraceptive choice. For example, the woman who has infrequent intercourse may not wish to use a method that requires daily medication or continuous exposure to possible side effects posed by pills, implants, injections, or IUDs. On the other hand, infrequent intercourse may also indicate that a client is at risk of unpredicted intercourse. These clients may need skills in "expecting the unexpected."

Husband's Objections

In sub-Saharan Africa, many women who do not want more children still do not use contraception because they say they face opposition from their husbands.[1] (See Table 11:4.) Surprisingly, lack of discussion may be the reason they believe they face opposition. More than half of women who report their husbands disapprove of family planning have never even discussed family planning with them. These clients need skills in initiating nonthreatening discussions with their husbands and then selecting methods that would suit the couple's relationship.

Access to Medical Care. Many women have difficulty gaining access to the health care system: they do not understand the system, cannot afford it, or find that it shuns them. Others may find their

access hampered by too long a wait at the clinic. Studies have shown that access has great bearing on contraceptive compliance and choice.[26] Access can be eased for all clients by providing a full year's supply of contraceptives (13 cycles of pills or 100 condoms).

Goals for Teaching About Personal Considerations

Key concepts for discussing and teaching about contraceptive choice and personal considerations include the following:

1. **The client decides which personal considerations matter**. Only the potential user can weigh all the elements for personal choice, and the clinician will not be able to predict what matters. Privacy? Lubrication? Light periods? What big sister uses? Do not guess—ask.
2. **It is a long way from the examination room to the bedroom**. We offer methods as medicines in a clinical setting, and then our clients go home and use them in a sexual setting, be it a bedroom or a field. Remember to help your client think through the sexual aspects of contraception.
3. **Clients may need permission to make a second (or third) contraceptive choice**. They may not like the first method at all and will need to know it is a good idea to come back to try something else. Besides, it is always good to know how to use several methods.
4. **Clients can be encouraged to talk about birth control issues with their partners**. How can one person decide whether a method of birth control will be compatible with a couple's personal and sexual styles? Help your clients practice discussing birth control with their partners if this is new territory for them.
5. **Personal considerations are likely to change over time**. Teenagers and 35-year-olds will use very different criteria as they evaluate their contraceptive choices. Encourage clients to rethink their contraceptive needs as their lives, sexual drives, and bodies change over time.
6. **Teach clients a wise and cautious approach to sexual activity**. All sexually active people need to know the risk factors for STIs and HIV infection and how to avoid them.

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